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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|-------------------------------|------------------------|
| 10/657,483 | 09/08/2003 | Brian E. Curcio | END920000122US3 (IEN-10-5) | 7494 |
| 26681 7590 10/15/2007 DRIGGS, HOGG & FRY CO. L.P.A. 38500 CHARDON ROAD DEPT. IEN WILLOUGHBY HILLS, OH 44094 | | | EXAMINER OLSEN, ALLAN W | |
| | | | ART UNIT 1792 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|--------------------------|-------------------------------|-------------------------------|--|
| Interview Summary | Application No. 10/657,483 | Applicant(s) CURCIO ET AL. | |
| | Examiner Allan Olsen | Art Unit 1792 | |

All participants (applicant, applicant's representative, PTO personnel):

(1) Allan Olsen. (3) _____.

(2) Anthony Del Zoppo III. (4) _____.

Date of Interview: 11 October 2007.

Type: a) ☒ Telephonic b) ☐ Video Conference
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☐ No.

If Yes, brief description: _____.

Claim(s) discussed: newly proposed claim provided by fax and appended hereto.

Identification of prior art discussed: Lykins (6440,641); Maeda (5,624,268); Katoh (6,426,011); Bhatt (6,009,620); Kataoka (EP 0 996 318).


Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.



Examiner's signature, if required

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: The manner in which the newly proposed claim is distinguished from each of the above noted references was discussed. Particular emphasis was placed on the newly introduced aspect of completely filling the holes. Also, we discussed the fact that in applicant's invention, the "nubs" are a desired feature and the nubs are not removed. The nubs are actually used to make electrical connection between two components. We also discussed the fact that in applicant's invention, a portion of the first and/or second conductive layer remains and electrically connects two filled holes .

1. A method for forming a core member for use in laminating to another core member to form a printed wiring board, comprising:

forming a first copper coating on a first side of a dielectric substrate, wherein the dielectric substrate is a glass reinforced epoxy and the first copper coating is about 35 microns thick;

forming a second copper coating on a second side of the dielectric substrate, wherein the first and second sides are located on opposite sides of the dielectric substrate, wherein the second copper coating is about 35 microns thick;

forming first and second holes, wherein each of the first and second holes extends through all three of the first copper coating, the dielectric substrate, and the second copper coating;

plating the first and second holes with a conductive metal to form a conductive path in each of the first and second holes between the first and second copper coatings, wherein the plating is performed using one of electroless or electrolytic plating;

filling the entirety of each of the first and second holes with a conductive adhesive by one of screening, stenciling, flood coating, doctor blading, immersing and injecting, wherein the adhesive is heated to enhance its flow characteristics;

heating the conductive material to about degrees Celsius until the degree of cure of the conductive material is advanced from about 20% to about 80% of complete cure;

removing a first sub-portion of the first and second copper coatings so that the conductive adhesive in the first and second holes extends beyond an entirety of a second sub-portion of the first and second copper coatings on both sides of the dielectric substrate in a direction away from the dielectric substrate, wherein the conductive adhesive in the first and second holes extends beyond the entirety of the second sub-portion of the first and second copper coatings to form first and second nubs of the conductive material; and

removing the second sub-portion of the first and second copper coatings from the entirety of both the first and second sides of the dielectric substrate except for in a region between the first and second holes on one of the first or the second sides of the dielectric substrate using a photolithographic process with a positive or negative photoresist, wherein the remaining second sub-portion of the first or second copper coatings connects the conductive adhesive in the first and second holes together.